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GenCore version 5.1.3

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OM protein - protein search, using sw model

Run on: December 30, 2002, 16:15:02; Search time 12 Seconds (without alignments)
224.663 Million cell updates/sec

Title: US-09-664-326-23
Perfect score: 368
Sequence: 1LTYTDCTESGQNLCLCEGSN.......PKPQSHNDGDFEEIPEEYLQ 65

Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5

Searched: 112892 seqs, 41476328 residues

Total number of hits satisfying chosen parameters: 112892
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SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

SwissProt_40:*

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

332	31	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	80	7	0	G	4	ω	N	1		Result	
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ALIGNMENTS

Local

Similarity

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RESULT 2
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Matches 63
Query Match
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ProDom; PD004216; Hirudin; 1.

Serine protease inhibitor; Sulfation; Multigene family; Pharmaceutical; 3D-structure.

DISULFID 16 28

DISULFID 16 28

MOD 5--
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P28506;
01-DEC-1992 (Rel. :
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                          Serine protease 1
DISULFID 6
DISULFID 16
DISULFID 22
MOD_RES 63
                                                                                                                                                      Scharf M., Engels J., Tripier D.;

**Primary structures of new 'iso-hirudins'.";

**FEBS Lett. 255:105-110(1989).

-i- FUNCTION: HIRDRIN TO ...
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Eukaryota; Metazoa; Annelida; Clitellata; Hiru
Arynchobdellida; Hirudiniformes; Hirudinidae;
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                                                                                         Pfam; PF00713; Hirudin;
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                                                                                                                                                                                                                     Arynchobdellida;
NCBI_TaxID=6421;
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                                                                                                                     S Lett. 255:105-110(1989).

S Lett. 255:105-110(1989).

FUNCTION: HIRUDIN IS A POTENT THROMBIN-SPECIFIC PROTEASE INHIBITOR. IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-THROMBIN, THEREBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINOGEN.

STMILARITY: BELONGS TO THE HIRUDIN FAMILY.
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63; Conser
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PD004216; Hirudin
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IPR000429; Hirudin.
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DISULFID 6 14
DISULFID 16 28
DISULFID 22 39
MOD_RES 63 63
                Eukaryota; Metazo
Arynchobdellida;
NCBI_TaxID=6421;
[1]
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ITHC_HIRME
P28503;
01-DEC-1992
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01-DEC-1992
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MOD_RES
SEQUENCE
                                                   Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hir
Arynchobdellida; Hirudiniformes; Hirudinidae;
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InterPro; IPR000429; Hirudin.
Pfam; PF00713; Hirudin; 1.
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Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
NCBI_TaxID-6421;
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SEQUENCE
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FUNCTION: HIRODIN IS A POTENT THROMBIN-SPECIFIC PROTEASE FUNCTION: IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-THROMBIN. THERBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINGGEN.
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J., Tripier D.;
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Serine protease inhibitor; S
DISULFID 6 14
DISULFID 16 28
DISULFID 22 39
MOD_RES 63 63
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Scharf M., Engels J., Tripler D.;
Primary structures of new 'iso-hirudins'.";
FEBS Lett. 255:105-110(1989).
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Eukaryota; Metazoa; Annelida; Clitellata; Hir
Arynchobdellida; Hirudiniformes; Hirudinidae;
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                                                                                                                                                                                                                                                                                                                                                  Hirudin II.
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; P09945; 4HTC.
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LTYTDCTESGQNLCLCEGSNVCGQGNKCILGSDGEKNQCVTGEGTPKPQSHNDGDFEEIP
                                                                                                                                                        Pro; IPR000429; Hirudin. PF00713; Hirudin; 1.
                                                                                                                                                                               P09945; 4HTC
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SULFATION (BY SIMILARITY).
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                      Score 348; DB Pred. No. 3.8e 5; Mismatches
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DISULFID 6 14
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DISULFID 22 39
MOD_RES 63 63
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Hirudin IIIA'.
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Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
NCBI_TaxID-6421;
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NCBI_TaxID=6421;
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MEDLINE=90005945; PubMed=2792365;
Scharf M., Engels J., Tripler D.;
"Primary structures of new 'iso-hirudins'.";
                                                                                                                                                                                                                                                                      ITHH_HIRME
P28508;
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Scharf M., Engels J.,
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Hirudiniformes; Hirudinidae; Hirudo.
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J., Tripier D.;
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Pred. No. 3.8e-31;
2; Mismatches 2;
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SULFATION (BY SIMILARITY).
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DISULFID 6
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MOD_RES 63
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PRINTS; PR00777; HIRUDIN.
ProDom; PD004216; Hirudin;
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Eukaryota; Metazoa; Annelida; Clitellata; Hiru
Arynchobdellida; Hirudiniformes; Hirudinidae;
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HSSP; P01050; 1HIC.
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Scharf M., Engels
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                                                                                                                                                                                                                                                                                                  ProDom;
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FUNCTION: HIRUDIN'IS A POTENT THROMBIN-SPECIFIC PROTEASE INHIBITOR. IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-THROMBIN, THEREBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINOGEN. SIMILARITY: BELONGS TO THE HIRUDIN FAMILY.

P; P01050; 1HIC.
                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: HIRUDIN IS A POTENT THROMBIN-SPECIFIC PROTEASE INHIBITOR. IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-THROMBIN, THEREBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINGEN. SIMILARITY: BELONGS TO THE HIRUDIN FAMILY.
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VVYTDCTESGEDLCLCEGSNVCGEGNKCILGSDGEKNECVTGEGTPKPQSHNDGDFEEIP
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                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                  PR00777; HIRUDIN. PD004216; Hirudin
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inhibitor;
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inhibitor; Sulfation;
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24, Last sequ
24, Last anno
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J., Tripier D.;
es of new 'iso-hirudins'.";
                                                                                                                                                                     7028 MW;
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BY SIMILARITY.
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SULFATION (BY SIMILARITY).
MW; 05F6A0B26A3DE9FC CRC64;
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annotation
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SULFATION (BY SIMILARITY).
CA8BEOD72B6449E4 CRC64;
                                                                                  Score 345; DE
Pred. No. 8e-3
3; Mismatches
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8e-31;
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.3e-31;
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Best Local
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SCHART M., Engels J., Tripler D.;
Scharf M., Engels J., Tripler D.;
Scharf M., Engels J., Tripler D.;
"Primary structures of new 'iso-hirudins'.";
"PRIMARY STRUCTURES OF NEW THROMEIN-S
""AFILE NON-COVALE!"
""TIT!"
                                                                                                                                                      P28505;
01-DEC-1992
01-DEC-1992
01-DEC-1992
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Arynchobdellida; Hirt
NCBI_TaxID=6421;
[1]
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P28510;
01-DEC-1992
                                                                                        Eukaryota; Metazoa; Annelida; Clitellata; Hiru
Arynchobdellida; Hirudiniformes; Hirudinidae;
NCBI_TaxID=6421;
MEDLINE=90005945; PubMed=2792365;
Scharf M., Engels J., Tripler D.;
"Primary structures of new 'iso-hirudins'.";
FEBS Lett. 255:105-110(1989).
-1- FUNCTION: HIRUDIN IS A POTENT THROMBIN-S
INHIBITOR. IT FORMS A STABLE NON-COVALEN
                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom: PD004216; Hirudin; 1.
Serine protease inhibitor; Sulfation;
DISULFID 6 14 BY SIMILA
DISULFID 16 28 BY SIMILA
DISULFID 22 39 BY SIMILA
DISULFID 22 39 BY SIMILA
MOD_RES 63 63 SULFATION
                                              SEQUENCE.
MEDLINE=90005945;
Scharf M., Engels
                                                                                                                               Hirudin II'.
Hirudo medicinalis
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InterPro; IPR000429; Hirudin.
Pfam; PF00713; Hirudin; 1.
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Eukaryota, Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
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 A POTENT THROMBIN-SPECIFIC PI
STABLE NON-COVALENT COMPLEX
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Pred. No. 8e-3
3; Mismatches
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SULFATION (BY SIMILARITY).
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8e-31;
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dae; Hirudo.
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RESULT 11
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MOD_RES
SEQUENCE
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01-MAR-1989 (Rel. 10, Last sequence update)
15-JUL-1999 (Rel. 38, Last annotation update)
Hirudin variant-2 precursor (Fragment).
Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
                                                                                                                                                                                                                                                                                                                                                                                  Harvey R.P., Degryse E., Stefani L., Schamber F., Courtney M., Tolstoshev P., Lecocq J.-P.; "Cloning and expression of a cDNA coding for the hirudin from the bloodsucking leech, Hirudo medic Proc. Natl. Acad. Sci. U.S.A. 83:1084-1088(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PRO0777; HIRUDIN.

ProDom; PD004216; Hirudin; 1.

Serine protease inhibitor; Sulfation;
DISULFID 6 14 BY SIMILA
DISULFID 16 28 BY SIMILA
DISULFID 22 39 BY SIMILA
DISULFID 23 39 SULFATION
MOD_RES 63 63 SULFATION
   EMBL;
PIR; /
PDB; 3
PDB; 4
                                                                                   the European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entitles requires a license agreement (See http://www.isborsend an email to license@isb-sib.ch).
                                                                                                                                                                           This
                                                                                                                                                                                                                                                                                                              MEDLINE=90327074; PubMed=2374926;
Rydel T.J., Ravichandran K.G., Tu
Roitsch C., Fenton J.W. II;
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Pfam; PF00713; Hirudin; 1.
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                                                                                                                                                              between
                                                                                                                                                                                                                                                                   Science 249:277-280(1990).
                                                                                                                                                                                                                                                                                                                                                         X-RAY CRYSTALLOGRAPHY (2.3 ANGSTROMS) OF MUTANT LYS-54.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-86149219; PubMed=3513162;
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L; M12693; AAA29195.1;
L; A14988; CAA01205.1;
; A37417; A37417.
; 3HTC; 31-JAN-94.
; 4HTC; 31-JAN-94.
                                                                                                                                                                                                     FUNCTION: HIRDIN IS A POTENT THROMBIN-SPECIFIC PROTEASE INHIBITOR. IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-THROMBIN, THEREBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINGEN. SIMILARITY: BELONGS TO THE HIRUDIN FAMILY.
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                                                                                                                                                          SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation
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                                                                                                    (See http://www.isb-sib.ch/announce/
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.3e-30;
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Matches 54
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Best Local
                                                                                                  DISULFID 16 28
DISULFID 22 39
MOD_RES 64 64
SEQUENCE ---
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                                                                                                                                                                                                            SEQUENCE.

SEQUENCE.

MEDLINE=87026247; PubMed=3768144;

MEDLINE=87026247; PubMed=3768144;

Dodt J., Machleidt W., Seemueller U., Maschler R., Fritz H.;

"Isolation and characterization of hirudin isoinhibitors and sequential analysis of hirudin PA.";

Biol. Chem. Hoppe-Seyler 367:803-811(1986).

Biol. Chem. HOPPE-Seyler 367:803-811(1986).

FUNCTION: HIRUDIN IS A POTENT THROMBIN-SPECIFIC PROTEASE

"NWHIBITOR. IT FORMS A STABLE NON-COVALENT COMPLEX WITH ALPHA-
"NWHIBITOR. IT FORMS A STABLE INON-COVALENT COMPLEX WITH ALPHA-
"NWHIBITOR." AROLISHING ITS ABILITY TO CLEAVE FIBRINGGEN.
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DISULFID
DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                       ITH2_HIRME
P09944;
                                                                                                                                                                                                                                                                                                                                    Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hir
Arynchobdellida; Hirudiniformes; Hirudinidae;
                                                                                                                                                                                                                                                                                                                                                                           01-MAR-1989
01-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom; PD004216; Hirudin; 1.
Serine protease inhibitor; Sulfation; Multigene family; Signal;
                                                                                                                                                                                                                                                                                                                                                                  Hirudin PA:
                                                                                                                                                                                                                                                                                                                                                                                              01-MAR-1989
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                                                                                                                                                                    PRINTS;
                                                                                                                                                                                Pfam; PF00713; Hirudin;
                                                                                                                                                                                                  PIR; A24350; A24350.
HSSP; P09945; 4HTC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        InterPro; IPR000429;
Pfam; PF00713; Hirud:
                                                                                                                                                                                         InterPro; IPR000429;
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- E
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57; Conserv
                                                                                                                                                            PR00777; HIRUDIN.
PD004216; Hirudir
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24, Last
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72
72
21
35
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70
7571
                                                                        85.6%;
87.1%;
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    Sulfation; Multigene family.

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                                                              Score 315; DB 1;
Pred. No. 1.4e-27;
4; Mismatches 4
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C6EF2F28E9C45A5B
                                                                                                    SULFATION. FALB80B7F4FEA317 CRC64;
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dae; Hirudo.
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and sequence
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ITHV_HIRMA
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Best Local
TISSUE-Head;
TISSUE-Head;
TISSUE-Head;
MEDLINE-94000343; PubMed-our.

Electricwala A., Hartwell R., Scawen M.L.,

"The complete amino acid sequence of a hirudin variau.

Hirudinaria manillensis.";

J. Protein Chem. 12:365-370(1993).

J. Protein Chem. 12:365-370(1993).

TORMS A STABLE NON-COVALENT COMPLEX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Serine protease I
DISULFID 6
DISULFID 16
DISULFID 22
MOD_RES 63
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P81492;
15-DEC-1998
15-DEC-1998
15-DEC-1998
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                                                                                                                                                                                                                                                                                         Hirudin HVI (Burrudin).
Hirudinaria manillensis (Buffalo leech).
Eukaryota; Metazoa; Annelida; Clitellata;
Arynchobdellida; Hirudiniformes; Hirudinio
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPRO00429; Hirudin.
Pfam; PF00713; Hirudin; 1.
PRINTS; PR00777; HIRUDIN.
ProDom; PD004216; Hirudin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Hirudo medicinalis (Medicinal leech).
Eukaryota; Metazoa; Annelida; Clitellata; Hirudinida; Hirudinea;
Arynchobdellida; Hirudiniformes; Hirudinidae; Hirudo.
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01-DEC-1992 (Rel. 24,
16-OCT-2001 (Rel. 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDILINE=90005945; pubMed=2792365;
Scharf M., Engels J., Tripler D.;
Scharf M., Engels J., Tripler D.;
Primary structures of new 'iso-hirudins'.";
Primary structures of new 'iso-hirudins'.";
FEBS Lett. 255:105-110(1989).
FEBS Lett. 255:105-110(1989).
FEBS LETT. THROMEN IS A STABLE NON-COVALENT COMPLEX WITH ALPHA-
THROMEIN, THEREBY ABOLISHING ITS ABILITY TO CLEAVE FIBRINGEN.
                                                                                                                                                                                                                                                                                                                                                              Hirudin HV1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=6421;
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                                                                                                                                                                                                                           EQUENCE
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14 BY SIMILARITY.
28 BY SIMILARITY.
39 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                               37, Created)37, Last sequence up37, Last annotation
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81.5%;
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annotation
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PRODOM; PD004216; Hirudin;
Serine protease inhibitor;
DISULFID 16 28
DISULFID 16 28
DISULFID 22 37
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01-DEC-1992
16-OCT-2001
Hirudin P6.
                                                                                                            MOD_RES
SEQUENCE
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P28512;
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                                                                                                                                                                                           CARBOHYD
                                                                                                                                                                                                                                                                                                                              ProDom; PD004216
Serine protease
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa; Annelida; Cli
Arynchobdellida; Hirudiniformes;
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InterPro; IPR000429; Hirudin.
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                            Local
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                                                      Match
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  . Similarity 39; Conser
                                                                                                                                                                                                                                                                                                                                                             PD004216;
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                                                                                                                                                                                                                                                                                                     family.
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                                                                                                                                                                                                                                                                                                                              5; Hirudin; inhibitor;
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Last sequence update)
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BY SIMILARITY.
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O-LINKED (GALNAC...).
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149A7369CC75A192 CRC64;
7;
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BY SIMILARITY.
Score 215; DE Pred. No. 7.667; Mismatches
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Pred. No. 1.7e-20;
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es; Hirudinidae; Hirudinaria.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HIRUDIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
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No. 7
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  16;
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